UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
GODBOLD, DOUGLAS

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/541,192	BISSON ET AL.
	Examiner	Art Unit	
	DOUGLAS C. GODBOLD	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>01 April 2009</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-13</u> is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-13</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date <u>20090401</u>.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

1.   This Office Action is in response to correspondence filed April 1, 2009 in

reference to application 10/541,192. Claims 1-13 are pending and have been

examined.

Continued Examination Under 37 CFR 1.114

2.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 1,

2009 has been entered.

Information Disclosure Statement

3.   The Information Disclosure Statement filed April 1, 2009 has been accepted and

considered in this office action.

Response to Amendment

4.   The amendment filed April 1, 2009 has been accepted and considered in this

office action. Claims 1, 5, and 13 are have been amended.

Response to Arguments

5.   Applicant's arguments filed April 1, 2009 have been fully considered but they are

not persuasive.

6.   With regards to applicants arguments, see Remarks pages 5 and 6, that the

combination of Acero, Meng, and Monaco fail to teach certain limitations of claim 1, the

examiner respectfully disagrees. Acero, as cited in the previous rejections teaches

manually inputting a conceptual model into a machine.   In response to applicant's

argument that the references fail to show certain other features of applicant's invention,

it is noted that the features upon which applicant relies (i.e., calculating linguistic models

and an operator using revision means for refining results) are not recited in the rejected

claim(s). Although the claims are interpreted in light of the specification, limitations from

the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26

USPQ2d 1057 (Fed. Cir. 1993).

Claim Rejections - 35 USC § 103

7.   The text of those sections of Title 35, U.S. Code not included in this action can

be found in a prior Office action.

8.   Claims 1 are rejected under 35 U.S.C. 103(a) as being unpatentable over Acero

et al. (Grammar Learning for Spoken Language Understanding) in view of Meng et al.

(Semi-Automatic Acquisition of Domain-Specific Semantic Structures) and further in

view of Monaco (US Patent 6,434,523).

9.   Consider claim 1, Acero teaches a method for production of a speech recognition

interfaces interface for a domain specific to an applied field (abstract), comprising:

        manually building a conceptual model using two main knowledge sources

comprising generic grammar and basic vocabulary (Section 2.1 developers author

semantic schema. In order to do this they must have knowledge of basic grammar

library 2.2 and vocabulary as well. Any developer will have basic vocabulary knowledge

for the language in which they are developing the speech system.),

        producing a set of generic grammar rules representative of a class of

applications (Section 3.1 semantic constrains are determined from the semantic

schemas. Section 4, based on semantic classes, paragraph 2.).

        computing the syntactic and semantic grammar and the vocabulary specific to

the applied field (Section 3.1 semantic constrains are determined from the semantic

schemas. Section 4, based on semantic classes, paragraph 2),

        inputting the conceptual model to the speech recognition interface for the applied

field (semantic schemas must be entered by developer, section 2.1, and annotation

2.3. input can be domain specific section 2.4), and

        exemplifying different generic grammar rules whose constraints are satisfied

producing grammar for the applied field concerned from the exemplified generic

grammar and from a conceptual model (section 4, paragraph 3 shows different inputs

that were automatically labeled. These are examples of the grammar rules applied to

the specific applied field., in this case, calendar scheduling).

Acero does not specifically teach revising phraseology.

In the same field of semi-automatic grammar rule development, Meng teaches

revising phraseology (section VII Post-processing includes replacing tags with

meaningful labels, consolidating grammar categories, etc.).

Therefore it would have been obvious to one of ordinary skill in the art at the time

of the invention to combine the revisions of Meng with the system of Acero in order to

allow for errors to be corrected manually in order for the resultant grammar to more

accurately reflect the domain (Meng page 2 paragraph 4).

Acero and Meng do not specifically teach producing explanations of the

conceptual model.

In the same field of grammar creation, Monaco teaches producing explanations

(grammar specific language objects) of the conceptual model (Col. 6 lines 16-21 and

col. 3 lines 61-66, graphical representation of grammar rules are developed)

Therefore it would have been obvious to one of ordinary skill in the art at the time

of the invention to use the visual models of Monaco with the system of Acero and Meng

in order to allow a representation that allows easier understanding and editing of the

grammars; collumn1 line 59-62).

10.   Consider claim 2, Meng teaches the method as claimed in claim 1, wherein the

data input is revised and the terms contrary to the semantics of the application

concerned are corrected (section VII Post-processing includes pruning irrelevant non-terminals and terminals).

11.   Consider claim 3, Meng teaches the method as claimed in claim 1, wherein the data input is revised and new terms are added to enrich the grammar of the applied field (section VII Post-processing includes completing a set of terminals for some categories like days of the week.).

12.   Consider claim 4, Monaco teaches the method as claimed in claim 1, wherein the explanations explain rules applied when generating the grammar specific to the applied field (Col. 6 lines 16-21 and col. 3 lines 61-66, graphical representation of grammar rules are developed).

13.   Consider claim 5, Acero teaches a device for automatic production of speech recognition interfaces for a domain specific to an applied field (abstract), comprising:

        a user interface (inherent in order to enter semantic schema) for manually building a conceptual model using two main knowledge sources comprising generic grammar and basic vocabulary (Section 2.1 developers author semantic schema. In order to do this they must have knowledge of basic grammar library 2.2 and vocabulary as well. Any developer will have basic vocabulary knowledge for the language in which they are developing the speech system.),

        means for conceptual model input (inherent for developer to author schema),

derivation means (Section 3.1 semantic constrains are determined from the

semantic schemas. Section 4, based on semantic classes, paragraph 2),

means for providing a generic model (section 3.1, grammar learning is to learn

the expression of pre-terminals like heads commands preambles etc. this is generic

grammar information) and

means executing grammar specific to the applied field concerned (experimental

results section 4, semi-automatically derived grammar is used to parse sentences. Fig 5

shows resulting error rate).

Acero does not specifically teach revising phraseology.

In the same field of semi-automatic grammar rule development, Meng teaches

revising phraseology (section VII Post-processing includes replacing tags with

meaningful labels, consolidating grammar categories, etc.).

Therefore it would have been obvious to one of ordinary skill in the art at the time

of the invention to combine the revisions of Meng with the system of Acero in order to

allow for errors to be corrected manually in order for the resultant grammar to more

accurately reflect the domain (Meng page 2 paragraph 4).

Acero and Meng do not specifically teach the user interface being configured for

displaying and producing explanations of the conceptual model.

In the same field of grammar creation, Monaco teaches displaying and producing

explanations (grammar specific language objects) of the conceptual model (Col. 6 lines

16-21 and col. 3 lines 61-66, graphical representation of grammar rules are developed)

Therefore it would have been obvious to one of ordinary skill in the art at the time

of the invention to use the visual models of Monaco with the system of Acero and Meng

in order to allow a representation that allows easier understanding and editing of the

grammars; collumn1 line 59-62).

14.   Consider claim 6, Meng teaches the device as claimed in claim 5, wherein further

comprising revision means (section VII Post-processing).

15.   Consider claim 7, Meng teaches the device as claimed in claim 5, wherein further

comprising explanation means (Col. 6 lines 16-21 and col. 3 lines 61-66, graphical

representation of grammar rules are developed).

16.   Consider claim 8, Meng teaches the method as claimed in claim 2, wherein the

data input is revised and new terms are added to enrich the grammar of the applied field

(section VII Post-processing includes completing a set of terminals for some categories

like days of the week.).

17.   Consider claim 9, Monaco teaches the method as claimed in claim 2, wherein the

explanations explain rules applied when generating the grammar specific to the applied

field (Col. 6 lines 16-21 and col. 3 lines 61-66, graphical representation of grammar

rules are developed).

18.   Consider claim 10, Monaco teaches the method as claimed in claim 3, wherein

the explanations explain rules applied when generating the grammar specific to the

applied field (Col. 6 lines 16-21 and col. 3 lines 61-66, graphical representation of

grammar rules are developed).

19.   Consider claim 11, Monaco teaches the device as claimed in claim 5, wherein

the explanations explain rules applied when generating the grammar specific to the

applied field (Col. 6 lines 16-21 and col. 3 lines 61-66, graphical representation of

grammar rules are developed).

20.   Consider claim 12, Meng teaches the device as claimed in claim 6, wherein

further comprising explanation means (Col. 6 lines 16-21 and col. 3 lines 61-66,

graphical representation of grammar rules are developed).

21.   Consider claim 13, Acero teaches a method for producing a speech recognition

interface for a domain specific to a selected application (abstract) comprising:

        describing, using manual input means, the resources specific to the selected

application, by verbalizing concepts using a formal model of the selected application to

establish a conceptual model and the vocabulary of the selected application (Section

2.1 developers author semantic schema. In order to do this they must have knowledge

of basic grammar library 2.2 and vocabulary as well. Any developer will have basic

vocabulary knowledge for the language in which they are developing the speech

system. Developers use an XML based approach that sets up what is needed for the application.),

using derivation of the specific resources and generic resources to compute a linguistic model and vocabulary of sub-language dedicated to the speech recognition interface for said application when the resources specific to the application are acquired (Section 3.1 semantic constrains are determined from the semantic schemas. Section 4, based on semantic classes, paragraph 2),

inputting a set of statements of this sub-language, as well as the knowledge relating to the application and needed to manage an operator-system dialog (section 4, experimental sentences are used to test the system, in this case relating to date and calendars.), and

executing the resulting speech recognition interface on an selected environment to validate the interface (Figure 5 shows recognition result errors using the grammar semi-automatically determined.).

Acero does not specifically teach displaying and revising all or some of the input sub-language in order for a user to refine phraseology of this input by adding, deleting or modifying the phraseology.

In the same field of semi-automatic grammar rule development, Meng teaches revising phraseology by adding, deleting or modifying the phraseology (section VII Post-processing includes replacing tags with meaningful labels, consolidating grammar categories, completing terminals, removing irrelevant terminals.).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the revisions of Meng with the system of Acero in order to allow for errors to be corrected manually in order for the resultant grammar to more accurately reflect the domain (Meng page 2 paragraph 4).

Acero and Meng do not specifically teach producing explanations which make it possible to automatically identify conceptual and vocabulary data input by the user from which a given characteristic of a statement or a set of statements of the sub-language originates,

In the same field of grammar creation, Monaco teaches producing explanations (grammar specific language objects) which make it possible to automatically identify conceptual and vocabulary data input by the user from which a given characteristic of a statement or a set of statements of the sub-language originates.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use the visual models of Monaco with the system of Acero and Meng in order to allow a representation that allows easier understanding and editing of the grammars; collumn1 line 59-62).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOUGLAS C. GODBOLD whose telephone number is (571)270-1451. The examiner can normally be reached on Monday-Thursday 7:00am-4:30pm Friday 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Richemond Dorvil can be reached on (571) 272-7602. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DCG

/Richemond Dorvil/
Supervisory Patent Examiner, Art Unit 2626